

11/04/13 Agenda

- Warm up
- Review NGA from Friday
- Review Unit 2 Test from last Monday
- Review 3.1 Homework
 - p. 168-170 (8-38 evens, 44-50 evens, 60)
- Review Section 3.1 - Inequalities & Their Graphs

Homework - Worksheet 3-1 - both sides

Warmup:



- Grab a slip of paper
- Put your name on it

- Distribute **$3x(-3+7)$**

$$-9x + 21x$$

$$12x$$

$$3x \begin{array}{|c|c|} \hline -3 & +7 \\ \hline \end{array}$$

$$-9x + 21x$$

$$12x$$

$$3x(-3+7)$$

$$3x(4) = 12x$$

Section 3.1 - Inequalities & Their Graphs

Target 3A & 3B

Goal:

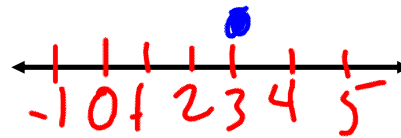
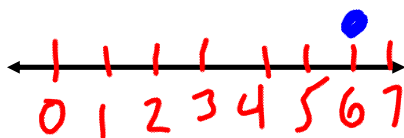
Write and graph inequalities.

Solve:

$$\begin{array}{r} x + 3 = 9 \\ -3 \quad -3 \\ \hline x = 6 \end{array}$$

$$\begin{array}{r} x - 4 = -1 \\ +4 \quad +4 \\ \hline x = 3 \end{array}$$

We just solved these with an algebraic representation. What would they look like on a number line?



Inequalities:

are like an equation, but compare two values that are not equal.

It can be represented as an algebraic inequality or visually on a number line.

Inequality Signs:

Less Than: $<$

Greater Than: $>$

Less than or equal to: \leq

Greater than or equal to: \geq

Section 3.1 - Inequalities & Their Graphs

Target 3A & 3B

Words to
Symbols:

x is less than or equal to 7 $x \leq 7$

6 less than a number k is greater than 13
 $k - 6 > 13$

You try:

p is greater than or equal to 9
 $p \geq 9$

the sum of t and 7 is less than -5
 $(t + 7) < -5$

Section 3.1 - Inequalities & Their Graphs

Target 3A & 3B

Graphing:

Type of Circle:

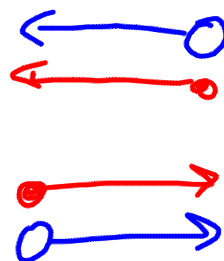
Open: \bigcirc $<$ $>$

Closed: \bullet \leq \geq

Direction:

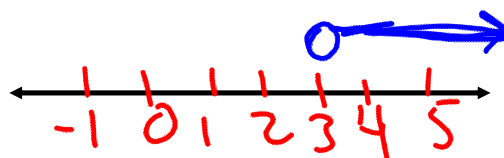
Left

Right

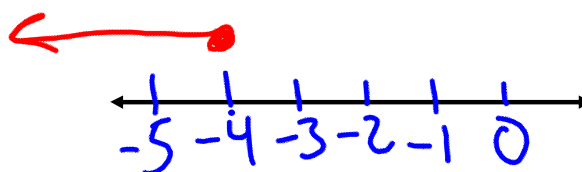


Lets do some:

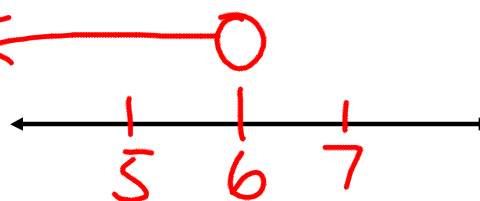
$$x > 3$$



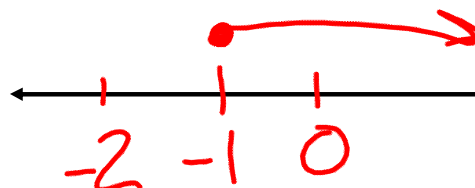
$$y \leq -4$$



$$k < 6$$



$$z \geq -1$$



Section 3.1 - Inequalities & Their Graphs

Target 3A & 3B

Is a value a solution to an inequality?

Example:

Determine whether each number is a solution to the following inequality:

$$5y - 7 > 13$$

$$5(-4) - 7 > 13$$

$$-20 - 7 > 13$$

$$-27 > 13$$

a.) ~~-4~~
~~NO~~

b.) 8

YES

$$5(8) - 7 > 13$$

$$40 - 7 > 13$$

$$33 > 13$$